ELSEVIER

Ultramicroscopy 55 (1994) 439–441

ultramicroscopy

Author index to volume 55

Allen, L.J., T.W. Josefsson and C.J. Rossouw, Interaction delocalization in characteristic X-ray emission from light elements 55 (1994) 258
Allen, L.J., see Spargo 55 (1994) 329
Amelinckx, S., see Zhang 55 (1994) 25
Anderson, S.C., see Chou 55 (1994) 334
Aoyama, K., see Ru 55 (1994) 209

Beeching, M.J., see Spargo 55 (1994) 329
Berger, A., J. Mayer and H. Kohl, Detection limits in elemental distribution images produced by energy filtering TEM: case study of grain boundaries in Si_3N_4 55 (1994) 101
Bernaerts, D., see Zhang 55 (1994) 25
Beveridge, T.J., see Firtel 55 (1994) 113
Blackford, B., see Firtel 55 (1994) 113
Booker, G.R., see Konkol 55 (1994) 183
Botton, G.A., see Burgess 55 (1994) 276
Braun, H.G., see Burmester 55 (1994) 55
Burgess, W.G., A.R. Preston, G.A. Botton, N.J. Zaluzec and C.J. Humphreys, Benefits of energy filtering for advanced convergent beam electron diffraction patterns 55 (1994) 276
Burmester, C., H.G. Braun and R.R. Schröder, A new quasi-confocal image plate scanner with improved spatial resolution and ideal detection efficiency 55 (1994) 55

Caspar, D., see Ruiz 55 (1994) 383
Cheng, S.C., see Egerton 55 (1994) 43
Chou, C.T., S.C. Anderson, D.J.H. Cockayne, A.Z. Sikorski and M.R. Vaughan, Surface relaxation of strained heterostructures revealed by Bragg line splitting in LACBED patterns 55 (1994) 334
Cockayne, D.J.H., see Chou 55 (1994) 334
Cowley, J.M., see Wang 55 (1994) 228
Cowley, J.M., see Hsu 55 (1994) 302
Cyrklaff, M. and W. Kühlbrandt, High-resolution electron microscopy of biological specimens in cubic ice 55 (1994) 141

Daykin, A.C., A report on speckle and coherent diffraction phenomena in selected-area transmission electron diffraction patterns 55 (1994) 121
DeRosier, D.J., see Ruiz 55 (1994) 383
Diaz-Avalos, R., see Ruiz 55 (1994) 383
Dinges, C., H. Kohl and H. Rose, High-resolution imaging of crystalline objects by hollow-cone illumination 55 (1994) 91
Dong, F.X., see Goodman 55 (1994) 314
Dunkelberger, D.G., see Fan 55 (1994) 7

Eades, J.A., see Lordi 55 (1994) 284
Egerton, R.F. and S.C. Cheng, Characterization of an analytical electron microscope with a NiO test specimen 55 (1994) 43
Ellisman, M.H., see Fan 55 (1994) 7
Ellisman, M.H., see Fan 55 (1994) 155
Endo, J., see Ru 55 (1994) 209

Fan, G.Y., D.G. Dunkelberger and M.H. Ellisman, Performance of thin foil scintillating screen for transmission electron microscopy 55 (1994) 7
Fan, G.Y. and M.H. Ellisman, Stereoscopy by tilted illumination in transmission electron microscopy 55 (1994) 155
Firtel, M., W. Xu, G. Southam, P.J. Mulhern, B. Blackford, M.H. Jericho and T.J. Beveridge, Tip-induced displacement and imaging of a multilayered bacterial structure by scanning tunneling microscopy 55 (1994) 113
Fu, Q., see Völkl 55 (1994) 75
Fujimoto, F., A. Mazel and J. Sévely, Image formation by inelastically scattered electrons in TEM and STEM 55 (1994) 253

Glaeser, R.M., see Han 55 (1994) 1
Gong, H., Theory and computation for imaging in scanning transmission microscopy considering partial coherence in illumination 55 (1994) 373
Goodman, P., Foreword to Festschrift for Gunter Lehmpfuhl 55 (1994) vii

Elsevier Science B.V.

Goodman, P., S. Matheson and F.X. Dong, Bloch-wave analysis of periodic surface contrast in zone-axis images 55 (1994) 314

Han, B.-G., S.G. Wolf, J. Vonck and R.M. Glaeser, Specimen flatness of glucose-embedded biological materials for electron crystallography is affected significantly by the choice of carbon evaporation stock 55 (1994) 1
Høier, R., see Marthinsen 55 (1994) 268
Holmestad, R., see Marthinsen 55 (1994) 268
Horio, Y. and A. Ichimiya, Origin of phase shift phenomena in RHEED intensity oscillation curves 55 (1994) 321
Hsu, T. and J.M. Cowley, Study of twinning with reflection electron microscopy (REM) 55 (1994) 302
Humphreys, C.J., see Burgess 55 (1994) 276

Ichimiya, A., see Horio 55 (1994) 321
Ishizuka, K., T. Tanji, A. Tonomura, T. Ohno and Y. Murayama, Aberration correction using off-axis holography. II. Beyond the Scherzer limit 55 (1994) 197
Ishizuka, K., Coma-free alignment of a high-resolution electron microscope with three-fold astigmatism 55 (1994) 407

Jericho, M.H., see Firtel 55 (1994) 113
Johnson, A.W.S. and A.R. Preston, Some notes on the selection of structural chirality by CBED 55 (1994) 348
Josefsson, T.W., see Smith 55 (1994) 247
Josefsson, T.W., see Allen 55 (1994) 258

Kambe, K. and C. Stampfl, Non-local pseudopotentials in the multi-slice method of calculating electron wavefunctions in crystals 55 (1994) 221
Kohl, H., see Dinges 55 (1994) 91
Kohl, H., see Berger 55 (1994) 101
Konkol, A., P.R. Wilshaw and G.R. Booker, Deconvolution method to obtain composition profiles from SEM backscattered electron signal profiles for bulk specimens 55 (1994) 183
Krivanek, O.L., Three-fold astigmatism in high-resolution transmission electron microscopy 55 (1994) 419
Kühlbrandt, W., see Cyrklaff 55 (1994) 141

Lai, G., see Ru 55 (1994) 209
Lenz, F., see Völkl 55 (1994) 75
Lichte, H., see Völkl 55 (1994) 75
Lordi, S., Y. Ma and J.A. Eades, Comparison of calculated and experimental convergent-beam RHEED patterns from MgO(100) 55 (1994) 284

Ma, Y., see Lordi 55 (1994) 284
Marks, L.D. and R. Plass, Partially coherent and holographic contrast transfer theory 55 (1994) 165
Marthinsen, K., R. Holmestad and R. Høier, Analytical filtering of low-angle inelastic scattering contributions to CBED contrast 55 (1994) 268
Matheson, S., see Goodman 55 (1994) 314
Mayer, J., see Berger 55 (1994) 101
Mazel, A., see Fujimoto 55 (1994) 253
Mulhern, P.J., see Firtel 55 (1994) 113
Murayama, Y., see Ishizuka 55 (1994) 197

Ohno, T., see Ishizuka 55 (1994) 197
Op de Beeck, M., see Van Dyck 55 (1994) 435

Peng, L.-M., see Wang 55 (1994) 67
Plass, R., see Marks 55 (1994) 165
Preston, A.R., see Burgess 55 (1994) 276
Preston, A.R., see Johnson 55 (1994) 348

Qian, W., see Spence 55 (1994) 19

Ranck, J.-L., see Ruiz 55 (1994) 383
Rose, H., see Dinges 55 (1994) 91
Rossouw, C.J., see Allen 55 (1994) 258
Ru, Q., Digital analysis of Young's interference fringes 55 (1994) 15
Ru, Q., G. Lai, K. Aoyama, J. Endo and A. Tonomura, Principle and application of phase-shifting electron holography 55 (1994) 209
Ruiz, T., J.-L. Ranck, R. Diaz-Avalos, D. Caspar and D.J. DeRosier, Electron diffraction of helical particles 55 (1994) 383

Saldin, D.K. and J.C.H. Spence, On the mean inner potential in high- and low-energy electron diffraction 55 (1994) 397
Sato, F., see Tanaka 55 (1994) 241
Saxton, W.O., What is the focus variation method? Is it new? Is it direct? 55 (1994) 171
Schattschneider, P., see Schenner 55 (1994) 31
Schenner, M. and P. Schattschneider, Spatial resolution in selected-area EELS 55 (1994) 31
Schröder, R.R., see Burmester 55 (1994) 55
Sévely, J., see Fujimoto 55 (1994) 253
Sikorski, A.Z., see Chou 55 (1994) 334
Smith, A.E. and T.W. Josefsson, The effect of a non-Hermitian crystal potential on the scattering matrix in reflection electron diffraction 55 (1994) 247
Southam, G., see Firtel 55 (1994) 113
Spargo, A.E.C., M.J. Beeching and L.J. Allen, Inversion of electron scattering intensity for crystal structure analysis 55 (1994) 329
Spence, J., W. Qian and X. Zhang, Contrast and radiation damage in point-projection electron imaging of purple membrane at 100 V 55 (1994) 19

Spence, J.C.H., Reflection electron microscopy of buried interfaces in the transmission geometry 55 (1994) 293
Spence, J.C.H., see Saldin 55 (1994) 397
Stampfl, C., see Kambe 55 (1994) 221

Tanaka, M., M. Terauchi and F. Sato, Observation of fourfold rotoinversion symmetry by convergent-beam electron diffraction 55 (1994) 241
Tanji, T., see Ishizuka 55 (1994) 197
Taylor, K.A., see Winkler 55 (1994) 357
Terauchi, M., see Tanaka 55 (1994) 241
Tonomura, A., see Ishizuka 55 (1994) 197
Tonomura, A., see Ru 55 (1994) 209
Tsuno, K., Simulation of a Wien filter as beam separator in a low energy electron microscope 55 (1994) 127

Uchida, Y., N. Wang and E. Zeitler, The alloying effect of Ag on the reconstruction in Au(111) and (100) surfaces observed by REM 55 (1994) 308

Van Dyck, D. and M. Op de Beeck, Announcement: Comparison and test of HRTEM image simulation programs 55 (1994) 435
Van Landuyt, J., see Zhang 55 (1994) 25
Van Tendeloo, G., see Zhang 55 (1994) 25
Vaughan, M.R., see Chou 55 (1994) 334
Völkl, E., F. Lenz, Q. Fu and H. Lichte, Density correction of photographic material for further image processing in electron microscopy 55 (1994) 75
Vonck, J., see Han 55 (1994) 1

Wang, L. and J.M. Cowley, Electron channelling effects at high incident angles in convergent beam reflection high energy electron diffraction 55 (1994) 228
Wang, N., see Uchida 55 (1994) 308
Wang, S.Q. and L.-M. Peng, LACBED determination of structure factors and alloy composition of GeSi/Si SLS 55 (1994) 67
Werner, H., see Zhang 55 (1994) 25
Wilshaw, P.R., see Konkol 55 (1994) 183
Winkler, H. and K.A. Taylor, 3D reconstruction by combining data from sections cut oblique to different unit cell axes 55 (1994) 357
Wolf, S.G., see Han 55 (1994) 1

Xu, W., see Firtel 55 (1994) 113

Zaluzec, N.J., see Burgess 55 (1994) 276
Zeitler, E., see Uchida 55 (1994) 308
Zhang, X., see Spence 55 (1994) 19
Zhang, X.B., see Zhang 55 (1994) 25
Zhang, X.F., X.B. Zhang, D. Bernaerts, G. Van Tendeloo, S. Amelinckx, J. Van Landuyt and H. Werner, A simple preparation method of air-sensitive specimens for transmission electron microscopy demonstrated by Rb_6C_{60} 55 (1994) 25

Subject guide to volume 55

General methods in microscopy
Holography
Exit wave reconstruction
Three-dimensional reconstruction and stereo microscopy
Electron diffraction
Convergent beam electron diffraction (CBED)
Scanning transmission electron microscopy (STEM)
Reflection electron microscopy (REM) and reflection high energy electron diffraction (RHEED)
Electron energy loss spectroscopy (EELS)
Energy-filtered imaging and diffraction
X-ray microanalysis
Scanning electron microscopy (SEM)
Low energy electron microscopy and diffraction (LEEM and LEED)
Scanning tunneling microscopy (STM)

Specimen-related methods
Specimen preparation and handling
Microscopic methods, specifically for biological specimens
Microscopic methods, specifically for solid interfaces and multilayers
Microscopic methods, specifically for surfaces
Cryomicroscopic methods
Radiation effects (experimental)

Tools
Electron microscope design and characterization
Instrument control and alignment
Image detectors
Image processing

Theories
Particle optics
Electron diffraction and elastic scattering theory, image simulation
Inelastic electron scattering theory
Contrast transfer theory

Miscellaneous subjects
Editorials, Announcements, Comments, Reports, Historical notes

ELSEVIER

Ultramicroscopy 55 (1994) 443–445

ultramicroscopy

Subject index to volume 55

Contrast transfer theory

High-resolution imaging of crystalline objects by hollow-cone illumination, *Dinges, Kohl and Rose* 55 (1994) 91

Partially coherent and holographic contrast transfer theory, *Marks and Plass* 55 (1994) 165

Theory and computation for imaging in scanning transmission microscopy considering partial coherence in illumination, *Gong* 55 (1994) 373

Convergent beam electron diffraction (CBED)

LACBED determination of structure factors and alloy composition of GeSi/Si SLS, *Wang and Peng* 55 (1994) 67

Electron channelling effects at high incident angles in convergent beam reflection high energy electron diffraction, *Wang and Cowley* 55 (1994) 228

Observation of fourfold rotoinversion symmetry by convergent-beam electron diffraction, *Tanaka, Terauchi and Sato* 55 (1994) 241

Analytical filtering of low-angle inelastic scattering contributions to CBED contrast, *Marthinsen, Holmestad and Høier* 55 (1994) 268

Surface relaxation of strained heterostructures revealed by Bragg line splitting in LACBED patterns, *Chou, Anderson, Cockayne, Sikorski and Vaughan* 55 (1994) 334

Some notes on the selection of structural chirality by CBED, *Johnson and Preston* 55 (1994) 348

Cryomicroscopic methods

High-resolution electron microscopy of biological specimens in cubic ice, *Cyrklaff and Kühlbrandt* 55 (1994) 141

Editorials, Announcements, Comments, Reports, Historical notes

Foreword to Festschrift for Gunter Lehmpfuhl, *Goodman* 55 (1994) vii

Announcement: Comparison and test of HRTEM image simulation programs, *Van Dyck and Op de Beeck* 55 (1994) 435

Announcement 55 (1994) 438

Electron diffraction

A report on speckle and coherent diffraction phenomena in selected-area transmission electron diffraction patterns, *Daykin* 55 (1994) 121

Electron diffraction of helical particles, *Ruiz, Ranck, Diaz-Avalos, Caspar and DeRosier* 55 (1994) 383

Electron diffraction and elastic scattering theory, image simulation

Non-local pseudopotentials in the multi-slice method of calculating electron wavefunctions in crystals, *Kambe and Stampfl* 55 (1994) 221

The effect of a non-Hermitian crystal potential on the scattering matrix in reflection electron diffraction, *Smith and Josefsson* 55 (1994) 247

Image formation by inelastically scattered electrons in TEM and STEM, *Fujimoto, Mazel and Sévely* 55 (1994) 253

Analytical filtering of low-angle inelastic scattering contributions to CBED contrast, *Marthinsen, Holmestad and Høier* 55 (1994) 268

Bloch-wave analysis of periodic surface contrast in zone-axis images, *Goodman, Matheson and Dong* 55 (1994) 314

Inversion of electron scattering intensity for crystal structure analysis, *Spargo, Beeching and Allen* 55 (1994) 329

On the mean inner potential in high- and low-energy electron diffraction, *Saldin and Spence* 55 (1994) 397

Announcement: Comparison and test of HRTEM image simulation programs, *Van Dyck and Op de Beeck* 55 (1994) 435

Electron energy loss spectroscopy (EELS)

Spatial resolution in selected-area EELS, *Schenner and Schattschneider* 55 (1994) 31

Electron microscope design and characterization

Characterization of an analytical electron microscope with a NiO test specimen, *Egerton and Cheng* 55 (1994) 43

Simulation of a Wien filter as beam separator in a low energy electron microscope, *Tsuno* 55 (1994) 127

Elsevier Science B.V.

Coma-free alignment of a high-resolution electron microscope with three-fold astigmatism, *Ishizuka* 55 (1994) 407
Three-fold astigmatism in high-resolution transmission electron microscopy, *Krivanek* 55 (1994) 419

Energy-filtered imaging and diffraction
Detection limits in elemental distribution images produced by energy filtering TEM: case study of grain boundaries in Si_3N_4, *Berger, Mayer and Kohl* 55 (1994) 101
Benefits of energy filtering for advanced convergent beam electron diffraction patterns, *Burgess, Preston, Botton, Zaluzec and Humphreys* 55 (1994) 276

Exit wave reconstruction
What is the focus variation method? Is it new? Is it direct?, *Saxton* 55 (1994) 171
Aberration correction using off-axis holography. II. Beyond the Scherzer limit, *Ishizuka, Tanji, Tonomura, Ohno and Murayama* 55 (1994) 197

Holography
A report on speckle and coherent diffraction phenomena in selected-area transmission electron diffraction patterns, *Daykin* 55 (1994) 121
Aberration correction using off-axis holography. II. Beyond the Scherzer limit, *Ishizuka, Tanji, Tonomura, Ohno and Murayama* 55 (1994) 197
Principle and application of phase-shifting electron holography, *Ru, Lai, Aoyama, Endo and Tonomura* 55 (1994) 209

Image detectors
Performance of thin foil scintillating screen for transmission electron microscopy, *Fan, Dunkelberger and Ellisman* 55 (1994) 7
A new quasi-confocal image plate scanner with improved spatial resolution and ideal detection efficiency, *Burmester, Braun and Schröder* 55 (1994) 55
Density correction of photographic material for further image processing in electron microscopy, *Völkl, Lenz, Fu and Lichte* 55 (1994) 75

Image processing
Digital analysis of Young's interference fringes, *Ru* 55 (1994) 15
Density correction of photographic material for further image processing in electron microscopy, *Völkl, Lenz, Fu and Lichte* 55 (1994) 75

Inelastic electron scattering theory
Image formation by inelastically scattered electrons in TEM and STEM, *Fujimoto, Mazel and Sévely* 55 (1994) 253
Interaction delocalization in characteristic X-ray emission from light elements, *Allen, Josefsson and Rossouw* 55 (1994) 258

Instrument control and alignment
Digital analysis of Young's interference fringes, *Ru* 55 (1994) 15
Coma-free alignment of a high-resolution electron microscope with three-fold astigmatism, *Ishizuka* 55 (1994) 407
Three-fold astigmatism in high-resolution transmission electron microscopy, *Krivanek* 55 (1994) 419

Low energy electron microscopy and diffraction (LEEM and LEED)
Contrast and radiation damage in point-projection electron imaging of purple membrane at 100 V, *Spence, Qian and Zhang* 55 (1994) 19

Microscopic methods, specifically for biological specimens
Electron diffraction of helical particles, *Ruiz, Ranck, Diaz-Avalos, Caspar and DeRosier* 55 (1994) 383

Microscopic methods, specifically for solid interfaces and multilayers
Reflection electron microscopy of buried interfaces in the transmission geometry, *Spence* 55 (1994) 293

Microscopic methods, specifically for surfaces
Bloch-wave analysis of periodic surface contrast in zone-axis images, *Goodman, Matheson and Dong* 55 (1994) 314
Surface relaxation of strained heterostructures revealed by Bragg line splitting in LACBED patterns, *Chou, Anderson, Cockayne, Sikorski and Vaughan* 55 (1994) 334

Particle optics
Simulation of a Wien filter as beam separator in a low energy electron microscope, *Tsuno* 55 (1994) 127

Radiation effects (experimental)
Contrast and radiation damage in point-projection electron imaging of purple membrane at 100 V, *Spence, Qian and Zhang* 55 (1994) 19

Reflection electron microscopy (REM) and reflection high energy electron diffraction (RHEED)
Electron channelling effects at high incident angles in convergent beam reflection high energy electron diffraction, *Wang and Cowley* 55 (1994) 228
The effect of a non-Hermitian crystal potential on the scattering matrix in reflection electron diffraction, *Smith and Josefsson* 55 (1994) 247

Comparison of calculated and experimental convergent-beam RHEED patterns from MgO(100), *Lordi, Ma and Eades* 55 (1994) 284
Reflection electron microscopy of buried interfaces in the transmission geometry, *Spence* 55 (1994) 293
Study of twinning with reflection electron microscopy (REM), *Hsu and Cowley* 55 (1994) 302
The alloying effect of Ag on the reconstruction in Au(111) and (100) surfaces observed by REM, *Uchida, Wang and Zeitler* 55 (1994) 308
Origin of phase shift phenomena in RHEED intensity oscillation curves, *Horio and Ichimiya* 55 (1994) 321

Scanning electron microscopy (SEM)
Deconvolution method to obtain composition profiles from SEM backscattered electron signal profiles for bulk specimens, *Konkol, Wilshaw and Booker* 55 (1994) 183

Scanning transmission electron microscopy (STEM)
Theory and computation for imaging in scanning transmission microscopy considering partial coherence in illumination, *Gong* 55 (1994) 373

Scanning tunneling microscopy (STM)
Tip-induced displacement and imaging of a multilayered bacterial structure by scanning tunneling microscopy, *Firtel, Xu, Southam, Mulhern, Blackford, Jericho and Beveridge* 55 (1994) 113

Specimen preparation and handling
Specimen flatness of glucose-embedded biological materials for electron crystallography is affected significantly by the choice of carbon evaporation stock, *Han, Wolf, Vonck and Glaeser* 55 (1994) 1
A simple preparation method of air-sensitive specimens for transmission electron microscopy demonstrated by Rb_6C_{60}, *Zhang, Zhang, Bernaerts, Van Tendeloo, Amelinckx, Van Landuyt and Werner* 55 (1994) 25
High-resolution electron microscopy of biological specimens in cubic ice, *Cyrklaff and Kühlbrandt* 55 (1994) 141

Three-dimensional reconstruction and stereo microscopy
Stereoscopy by tilted illumination in transmission electron microscopy, *Fan and Ellisman* 55 (1994) 155
3D reconstruction by combining data from sections cut oblique to different unit cell axes, *Winkler and Taylor* 55 (1994) 357

X-ray microanalysis
Characterization of an analytical electron microscope with a NiO test specimen, *Egerton and Cheng* 55 (1994) 43
Interaction delocalization in characteristic X-ray emission from light elements, *Allen, Josefsson and Rossouw* 55 (1994) 258